



*Advising the Congress on Medicare issues*

# Mandated report: Impact of changes in the 21<sup>st</sup> Century Cures Act to risk adjustment for MA enrollees

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# 21<sup>st</sup> Century Cures Act requires changes to MA risk adjustment

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- Directs Secretary to make several changes to risk adjustment in Medicare Advantage (MA)
- Directs MedPAC to evaluate effects of those changes and submit report to the Congress

# Capitated payments to MA plans

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- $\text{Payment} = (\text{Base rate}) * (\text{risk score})$ 
  - Base rate: Payment for beneficiary expected to cost as much as national average beneficiary in FFS Medicare
  - Risk score: Index; how much beneficiary is expected to cost relative to national average beneficiary in FFS Medicare
- Purpose of risk adjustment: Adjust payments to approximate expected costs; minimize incentive for patient selection
- Risk scores based on beneficiary characteristics
  - Demographic data in current (payment) year: age, sex, institutional status, Medicaid status, etc.
  - Medical conditions from diagnoses in previous (base) year

# CMS uses CMS-HCC risk-adjustment model to produce risk scores

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- This model collects diagnosis codes from base year into hierarchical condition categories (HCCs) such as stroke, acute renal failure, 3 for diabetes
- CMS uses regressions to determine how much on average each demographic variable and HCC affects a beneficiary's Medicare spending
- For each beneficiary, risk score is sum of regression coefficients for the beneficiary's demographic data and HCCs

# 21<sup>st</sup> Century Cures Act requires Secretary to make changes to CMS-HCC model

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- Separate risk score adjustments for beneficiaries with full Medicaid benefits and partial Medicaid benefits
- Add or modify HCCs for mental health disorders, substance abuse disorders, and chronic kidney disease
- Add adjustments for number of HCCs that each beneficiary has
- Suggests that two years of diagnosis data to determine HCCs could be used, when available; CMS-HCC model has always used one year of data

# CMS's response to mandate

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Year of change to CMS-HCC model	Separate adjustment for full/partial Medicaid benefits	Add or modify HCCs	Number of conditions	2 years diagnosis data
Pre-2017				
2017	✓			
2019	✓	✓		
2020	✓	✓	✓	

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# MedPAC's method of analysis

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- Evaluated five versions of CMS-HCC model
- Analytic file: 27.2 million FFS beneficiaries
  - Part A and Part B in all 12 months of 2016 (base year)
  - Part A and Part B in at least one month in 2017 (payment year)
- Divided analytic file in half; for each model version, performed regressions to determine coefficients on each demographic variable and HCC
- Using other half of file, used regression results to determine predicted Medicare spending (cost) and risk scores under each model version for each beneficiary

# Evaluating models

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- To minimize incentives for selection, model should produce predicted costs that, on average, accurately reflect actual costs for a group of beneficiaries
- Used predictive ratios to measure how well models predict costs for a group beneficiaries
- Predictive ratio (PR): Total predicted cost for a group divided by total actual costs
  - If  $PR > 1.0$ , costs are overpredicted (Medicare overpays)
  - If  $PR < 1.0$ , costs are underpredicted (Medicare underpays)
  - If  $PR = 1.0$ , costs are accurately predicted (desired outcome)

# Effect of separate adjustments for full and partial Medicaid benefits

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- Pre-2017, before the 21<sup>st</sup> Century Cures Act, CMS-HCC
  - Underpredicted by 5% for full Medicaid benefits
  - Overpredicted by 5% for partial Medicaid benefits
- 2017: CMS implemented CMS-HCC model with separate adjustments for full Medicaid benefits, partial Medicaid benefits
  - Accurately predicted costs (PR=1.0) for both full Medicaid benefits and partial Medicaid benefits
  - Prediction errors remained: PR < 1.0 for 10 or more conditions, high base-year costs, conditions not in model; PR > 1.0 for low base-year costs

# Effect of new or modified HCCs: Mental disorders, substance abuse, chronic kidney disease

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- 2019: CMS added or modified HCCs for mental disorders, substance abuse, and chronic kidney disease
- Costs accurately predicted for these new HCCs, in general
- However, prediction errors remained:  $PR < 1.0$  for 10 or more conditions, high base-year costs;  $PR > 1.0$  for low base-year costs

# Effect of adding adjustments for number of conditions

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- 2020: CMS added adjustments for number of conditions (HCCs) for each beneficiary
- Costs more accurately predicted for those with 10 or more conditions; slight improvement for high base-year costs
- However, prediction errors remained:  $PR < 1.0$  for high base-year costs;  $PR > 1.0$  for low base-year costs

# Effect of using two years of diagnosis data to determine HCCs

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- CMS has not implemented model using two years of data
- MedPAC has advocated use of two years of data
- In general, two years of data produces similar cost prediction results as the other versions we evaluated
  - But, larger underprediction for those who had high base-year costs
  - Why? Using two years of data produces smaller adjustments for conditions, thus lower predicted costs for those with many conditions and high base-year costs
- However, two years of data is a simple, effective alternative for addressing the problem of differences in coding intensity between FFS and MA

# Discussion

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- Focus of presentation: Address 21<sup>st</sup> Century Cures Act mandate
- Next steps:
  - Commissioner questions about method and content
  - Address Commissioner feedback and finish analysis for June 2020 Report to the Congress
- Additional risk adjustment issues or ideas for improving risk adjustment in the future